

Comparisons of Job Characteristics

Focus Occupation: [Electrical and Electronic Engineering Technicians \(17-3023\)](#)

Associated Occupation: [Electricians \(47-2111\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 69

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)

Associated Occupation: Electricians (47-2111)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mechanical	6.8	16.5	11.6	<<	Extensive education and/or training may be required
Building and Construction	4.0	14.6	4.1	<<	Extensive education and/or training may be required
Mathematics	9.2	14.5	11.2	<<	Extensive education and/or training may be required
Design	5.2	13.4	10.2	<<	Extensive education and/or training may be required
Administration and Management	8.4	12.2	4.8	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	11.8	12.4	0	Current knowledge level may be sufficient
Physics	4.3	10.9	6.3	<<	Extensive education and/or training may be required
Telecommunications	3.9	10.4	8.4	<	Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 59

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)

Associated Occupation: Electricians (47-2111)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Troubleshooting	4.5	12.3	8.8	<<	Extensive development of skills in this area may be required
Repairing	3.4	11.6	8.0	<<	Extensive development of skills in this area may be required

Quality Control Analysis	5.9	11.0	8.8	<	A higher skill level may be required
Equipment Maintenance	3.5	10.3	7.9	<<	Extensive development of skills in this area may be required
Installation	1.7	9.4	3.3	<<	Extensive development of skills in this area may be required
Equipment Selection	3.3	8.4	7.0	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 76

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)

Associated Occupation: Electricians (47-2111)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Visual Color Discrimination	6.4	12.8	9.6	<<	Extensive improvement in abilities may be required
Visualization	7.5	12.2	9.8	<	Some improvement in abilities may be required
Finger Dexterity	7.6	11.8	9.9	<	Some improvement in abilities may be required
Extent Flexibility	4.8	10.4	1.1	<<	Extensive improvement in abilities may be required
Gross Body Equilibrium	3.2	8.2	1.0	<<	Extensive improvement in abilities may be required
Speed of Limb Movement	3.2	6.6	1.0	<<	Extensive improvement in abilities may be required
Glare Sensitivity	2.6	5.9	1.0	<<	Extensive improvement in abilities may be required
Sound Localization	2.2	5.3	1.1	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 70

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)

Associated Occupation: Electricians (47-2111)

Work Activities	Exclusivity of Activity
Fabricate, assemble, or disassemble manufactured products by hand	11
Install/connect electrical equipment to power circuit	57
Read blueprints	10
Read technical drawings	7
Repair electronic components, equipment, or systems	74
Repair or replace electrical wiring, circuits, fixtures, or equipment	49

Solder electrical or electronic connections or components	55
Understand service or repair manuals	40
Use electrical or electronic test devices or equipment	40
Use hand or power tools	2
Use oscilloscopes in electronics repair	77

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 78

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)
Associated Occupation: Electricians (47-2111)

Tools and Technologies	Exclusivity
Business function specific software	1
Computer printers	2
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Data management and query software	1
Electrical hardware and supplies	47
Electrical measuring and testing equipment	7
Face and head protection	7
Holding and clamping tools	3
Indicating and recording instruments	2
Industry specific software	1
Light and wave generating and measuring equipment	4
Machine tools	7
Mechanical instruments	14
Power generators	16
Power tools	2
Soldering and brazing and welding machinery and supplies	6
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.